



Dart Aerospace Ltd.
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Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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Rush!!!

D5521-041
Job Sheet 188569



Part No: D5521-041

Job Qty: 10 pcs

Part Name: Oil Drain Hose Assembly



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/11/19

Job Tracking No:

Due Date: 2/28/19

Created By: Jesse White

Type: SOLD

Description:

Note: DWG REV A SHEET 1 IPP REV:A 17.04.12 NEW ISSUE DD VERF:JFS IPP REV:B 17.05.12 AS PER DWG REV:A DD VERF:JFS

Ship Via:

1915

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time
					Setup Hrs	Run Hrs	Workcenter / Supplier		
110	Small Fab - 1	10 pcs	2/28/19	0.00	2.00	Small Fab - 1			
						Small Fab - 2			
						Small Fab - 3			
						Small Fab - 4			
						Small Fab - 5			
						Small Fab - 6			
						Small Fab - 7			
120	QC 5	10 pcs	2/28/19	0.00	0.00	QC 5 - 10			
						QC 5 - 12			
						QC 5 - 17			
						QC 5 - 18			
						QC 5 - 19			
						QC 5 - 22			
						QC 5 - 24			
						QC 5 - 3			
						QC 5 - 38			
						QC 5 - 42			
						QC 5 - 43			
						QC 5 - 49			
						QC 5 - 51			
						QC 5 - 58			
						QC 5 - 68			
						QC 5 - 9			
						QC 5 - 50			
						QC 5 - 30			
130	Packaging 3-1 - Stock - B4B	10 pcs	2/28/19	0.00	0.00	Packaging 3 - 1 - B4B			
						Packaging 3 - 2 - B4B			
						Packaging 3 - 3 - B4B			
						Packaging 3 - 4 - B4B			
						Packaging 3 - 5 - B4B			

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. _____		Rework ☐		Skid-tube ☐		Water Jet ☐	
NCR No. _____				ab ☐		Prod. Eng. Coord. ☐	
Date: _____				ng ☐		Rec/Store/Packaging ☐	
				te ☐		Supplier ☐	
				ion ☐		Engineering ☐	
						Quality ☐	
						Other ☐	
						MRB (QSI042) Approval	
						Completed By	
						Lead hand / Supervisor Approval Verification	
						QC / QA Coordinator Approval	

Part: D5521 - 041
 Job No: 188569
 Serial No/Batch: S151564
 Revision:
 Inspector:
 Exp Date:
 Instructions: Various STC's
 Date: 02/07/19

Container No: S151564

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Root Cause				FAULT CATEGORY			
Environment	Operator	Bending	Temperature/Cure	Power Loss/Surge	Positioned Wrong		
Design	Offset/Setup	Centre Not Concentric	Set-up	Folio/Program	Outside Dimensions		
Doc/Data	Supplier	Cracks	BOM/Route	Grain	Over/Under tolerance		
Equip/Tooling	Training	Crimp/Kink/Ripple/Wave	Broken/Damage/Defect	Weld	Part Incorrect		
Handling/Pre	Use for Testing	Cuffs	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing		
Material	Poor Information	Crushing	Contamination	Out of Sequence	Part Moved		
Internal Transport	Rushing	Heat Treat	Countersink	Off-set	Drawing		
Tribal Knowledge	Product Improvement	Wave/Twist in Tube	Cut Too Short	Mislabeled	Finish		
LOA	Process Improvement	Marks/Chatter	Instructions Incomplete/Unclear	Fit/Function	Misread		
Substation	Manufacturing Process	OTHER :	Drill Holes	Misaligned/off center	Turning Sequence		
Past Expiry Date	Past Due						
Misidentified							

				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
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				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
140 QC 21 - SA	10 pcs	2/28/19	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
Part Op 110 - ASSEMBLE AS PERR DWG AND NOTE9 Descriptions: 120 - (QC5- Inspect part completeness to step on W/O) 130 - (Identify as per dwg & Stock Location: _____) 140 - (QC21- Final Inspection - Work Order Release)					DAS FEB 14 2019 21 9-30
Job BOM					
Part / Item	Component Name	Quantity	Operation	Container	
D5527-3	Activating Tool	10 pcs (1 ea)	110-Small Fab - 1		
D5528-1	Tubing	10 pcs (1 ea)	110-Small Fab - 1		
D5529-1	Double Ear Clamp	10 pcs (1 ea)	110-Small Fab - 1		
Job Allocations					
Operation	Component Part	Required	Inventory	Allocated	
110-Small Fab - 1	D5527-3	10	35	0	
	D5528-1	10	4	0	
	D5529-1	10	7	0	
Part Specifications					
Specifications could not be found.					

Plex 1/11/19 9:02 AM dart.white.jesse

D5529-1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

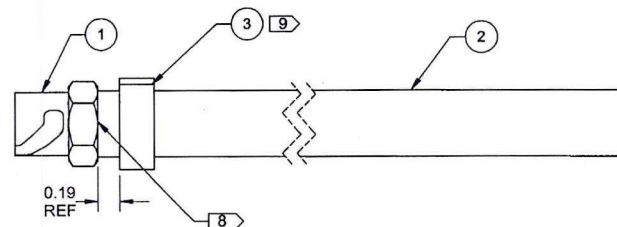
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	Pressure/Forced ☐	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	☐ Offset/Setup	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	☐ Supplier	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	☐ Training	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	☐ Use for Testing	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	☐ Poor Information	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	☐ Rushing	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	☐ Product Improvement	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	☐ Process Improvement	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

ITEM	QTY -041	P/N	DESCRIPTION
	X	D5521-041	OIL DRAIN HOSE ASSEMBLY
1	1	D5527-3	ACTIVATING TOOL
2	1	D5528-1	TUBING
3	1	D5529-1	EAR CLAMP



D5521-041 OIL DRAIN HOSE ASSEMBLY

NOTES:

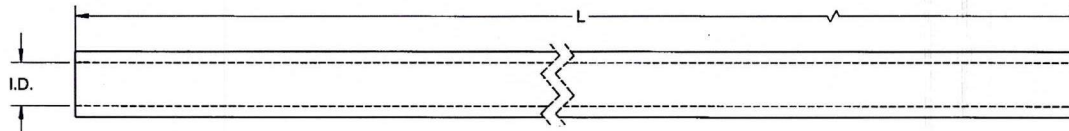
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.6
- 7) WEIGHT: N/A
- 8) ENSURE THAT THE D5527-3 ACTIVATING TOOL IS FULLY INSERTED INTO THE D5528-1 TUBING, SUCH THAT THE ACTIVATING TOOL NIPPLE IS COMPLETELY CONCEALED BY THE HOSE.
- 9) CLAMP THE D5528-1 TUBING TO THE D5527-3 ACTIVATING TOOL WITH THE D5529-1 EAR CLAMP USING CLAMP PINCERS (OETIKER TOOL NUMBER 14100386 OR MCMASTER-CARR TOOL NUMBER 6541K67 OR EQUIVALENT). CLAMP TO MANUFACTURER'S SPECIFICATIONS.

A	NEW ISSUE	WK	17.03.29
REV.	DESCRIPTION	BY	DATE
DESIGN	WK	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	WK		
CHECKED	VS	DRAWING NO.	REV. A
MFG. APPR.	DD	D5521	SHEET 1 OF 1
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	OIL DRAIN HOSE ASSY	NTS
DATE	17.03.29	COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2017-05-16
SCN 17-511

APPROVED

SPECIFICATION CONTROL DRAWING



D5528-X TUBING, PVC

DART PN	DESCRIPTION	MANUFACTURER	MANUFACTURER PN	VENDOR	VENDOR PN	MATERIAL	I.D. (INCHES)	L (FEET)	COLOUR
D5528-1	TUBING	SAINT-GOBAIN CORPORATION	TYGON VERSILON SE200	MCMaster-CARR	6519T14	PVC TUBING	3/8	10	CLEAR

NOTES:

- 1) MATERIAL: SEE TABLE
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

RELEASED
2017-05-16
ECN 17-511

APPROVED

APPROVED

A		NEW ISSUE		WK	17.03.29	
REV.		DESCRIPTION			BY	DATE
DESIGN	WK	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA				
DRAWN	WK					
CHECKED	VS	DRAWING NO.		REV. A		
MFG. APPR.	LL	D5528		SHEET 1 OF 1		
APPROVED	HS	TITLE		SCALE		
DE APPR.	DS	TUBING, PVC		NTS		
DATE		17.03.29		COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		